

8.

(Amended) A nucleic acid molecule comprising [the] one or more nucleotide sequences selected from the group consisting of the sequence set forth in SEQ ID NO: 1, the sequence set forth in SEQ ID NO: 3 [or] the sequence set forth in SEQ ID NO: 5, a sequence having at least about 80% identity with the sequence set forth in SEQ ID NO: 1, a sequence having at least about 80% identity with the sequence set forth in SEQ ID NO: 3, and a sequence having at least about 80% identity with the sequence set forth in SEQ ID NO: 5 [a mutant or fragment thereof; or a combination thereof].

(Amended) An enzyme having [substantially] the amino acid sequence set forth in SEQ ID NO: 2, or an enzymatically active fragment thereof.

(Amended) The enzyme of Claim <sup>20</sup>~~27~~ [having substantially the amino acid sequence set forth in SEQ ID NO: 2, or fragment thereof,] said enzyme or fragment thereof being substantially free of other *Sphingomonas* proteins.

(Amended) An enzyme having [substantially] the amino acid sequence set forth in SEQ ID NO: 4, or an enzymatically active fragment thereof, said enzyme or fragment thereof being substantially free of other *Sphingomonas* proteins.

(Amended) An enzyme having [substantially] the amino acid sequence set forth in SEQ ID NO: 6, or an enzymatically active fragment thereof.

(Amended) An enzyme having [substantially] the amino acid sequence set forth in SEQ ID NO: 6, or an enzymatically active fragment thereof, said enzyme being substantially free of other *Sphingomonas* proteins.

50.

(Amended) A transformed microorganism containing a recombinant DNA plasmid comprising a DNA molecule encoding an enzyme set forth in SEQ ID NO: 2, [a mutant] or an active fragment or [a] homologue thereof.

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51. (Amended) A transformed microorganism containing a recombinant DNA plasmid comprising a DNA molecule encoding an enzyme set forth in SEQ ID NO: 4, or [a mutant,] an active fragment or homologue thereof.
52. (Amended) A transformed microorganism containing a recombinant DNA plasmid comprising a DNA molecule encoding an enzyme set forth in SEQ ID NO: 6, or [a mutant,] an active fragment or homologue thereof.
53. (Amended) A transformed microorganism containing a recombinant DNA plasmid comprising a DNA sequence encoding an enzyme set forth in SEQ ID NO: 2, or [a mutant,] an active fragment or homologue thereof; a DNA sequence encoding an enzyme set forth in SEQ ID NO: 2, or [a mutant,] an active fragment or homologue thereof; and a DNA sequence encoding an enzyme set forth in SEQ ID NO: 2, or [a mutant,] an active fragment or homologue thereof.

#### REMARKS

Claims 2-8, 24, 28, 34, 35, 39 and 50-53 have been amended. Claims 1-75 are pending. The remainder of Applicants' remarks are presented below under appropriate subheadings.

#### Restriction of Claims 1-75 under 35 U.S.C. § 121

The Examiner required restriction of Claims 1-75 under 35 U.S.C. § 121 to Group I, Claim 1, drawn to a *Sphingomonas* culture; Group II, Claims 2-53, drawn to nucleic acids, vectors and transformed organisms containing these nucleic acids and enzymes encoded thereby; or Group III, Claims 54-75, drawn to methods of desulfurizing fossil fuels. The Examiner stated that the inventions of each group are distinct.

In a telephone conversation with the Examiner on May 5, 1998, Applicants' undersigned Agent provisionally elected with traverse to prosecute the invention of Group II, Claims 2-53. This election is hereby affirmed.